



# Prairie Update

A publication of the Saskatchewan Watershed Authority Volume 34 Winter 2008

## Working with the Land

**R**ick Silvester and his family moved from western Alberta to their farm southeast of Eston about 12 years ago. They quickly learned two things about the area: the value of a dependable water supply for their cattle, and the value of keeping their native prairie pastures healthy.

In 2002, drought conditions had a stranglehold on west central Saskatchewan. A Canada-wide drought in 2001 had been followed by a warm, dry winter. And while other areas of the province would get some much-needed precipitation later that spring and summer, the Silvesters saw little of it.

The lack of precipitation hit the Silvesters' cattle operation hard. Their herd of about 450 head is in the field all year long, and the only source of water for them at that time was a series of dugouts.

"We actually had to put a pipeline from the house and pipe water out two miles to the cows," says Rick Silvester.

"We had no water. And all our spring-fed dugouts were tramped-in by the cows and dried up. So we got a big drag-line in and cleaned them out, and they filled up in a matter of two weeks. And we decided from that point we'd never let a cow in there again."

Silvester started looking at various options for remote watering systems, which would let him fence off his dugouts, improve his grazing distribution, and provide a more reliable and higher-quality water supply. One major advantage he had was that many of his dugouts are located at higher elevations, so rather than having to constantly pump water, he could let gravity do the work for him.

"What we did was fenced [the dugouts] off and then ran lines to a gravity-fed trough, and kept the cows out of the water," says Silvester.

"It's just worked wonderful."

The Silvesters have now installed seven gravity-fed watering stations in various pastures, as well as four additional solar-powered stations where gravity systems weren't an option.



Rick Silvester at one of the livestock watering stations he installed after experiencing severe drought conditions in 2002.

Silvester says that, between the remote watering stations and the pipeline they've installed, he's confident they're ready for the next drought. And his cattle seem happy with the improvements too – particularly the calves.

"They're the ones that really love those troughs. Even when we'd have a solar system go down, and if they still had access to the dugout, those calves would stand at the trough and bawl," says Silvester.

"They don't like dirty water. A cow might drink it, but the calves won't."

The Silvesters have also taken steps to improve the way they use their native prairie pastures. Their main goal was to defer grazing on their native pastures until later in the summer, keeping the cattle off the grass during its crucial spring growth period. That way the native grass will be robust enough to support the herd well into the fall, after which the cows are moved onto hay land and bale-fed for the winter months.

The Silvesters chose to seed a significant portion of their farmland to tame grass species, then fenced the areas off. Now, the cattle graze these new tame pastures in early April, and are not moved to the native pastures until around the second week of July.

"The whole secret here is to keep your cows off your native grass and let it get its growth," says Silvester.

"When you give all those grasses a chance to head, you're getting a better stand of grass and better feed for your calves and cows. And it really works."

The Silvesters are managing their operation to make the most of what their land has to offer. In doing so, they have added to their bottom line and drought-proofed their operation, all while protecting water quality and maintaining valuable wildlife habitat.



The Saskatchewan Watershed Authority provided the Silvesters with financial assistance for installing several of their remote watering systems, and also for seeding and fencing a portion of their new tame pastures, using funding from the Government of Canada's Habitat Stewardship Program for Species at Risk. These projects are helping protect habitat for the Sprague's Pipit, a bird species which has been listed as threatened by the Committee on the Status of Endangered Wildlife in Canada. The Sprague's Pipit breeds primarily in native prairie, usually in patches with intermediate height and plant density.

# What's New

Take a look at some of the upcoming events and new projects and programs available from the Saskatchewan Watershed Authority and our partner agencies . . .

## Registration Now Open for Envirothon 2008

Saskatchewan Envirothon 2008 will be held Sunday, May 25th - Tuesday, May 27th, 2008 at Cypress Hills Inter-Provincial Park. Envirothon is an exciting event in which teams of five high-school-aged students exercise their environmental training and problem-solving skills in a competition centered on four universal testing categories (i.e., soils/land use, aquatic ecology, forestry, and wildlife) and a current environmental issue (renewable energy).

Each team consists of five students and one Advisor/Teacher from the same school. For logistical purposes, there will be a limit of 15 teams for this year's competition. In the fall, registered teams will receive a series of binders, one per topic. Students will study the material in the binder to



The 2007 Saskatchewan Envirothon champions, the Walter Murray Collegiate "B" team (left-right): Claire Cooke (teacher), Rocky Wang,

(306) 665-6887. Registration forms are available at [www.saskriverbasin.ca](http://www.saskriverbasin.ca).

prepare for the event.

For more information or to register, please e-mail Jennifer at [partners@saskriverbasin.ca](mailto:partners@saskriverbasin.ca) or call Lis at

## Nature Saskatchewan Book Wins Publishing Award

A new publication from Nature Saskatchewan was recently honoured with the Award for Publishing at the Saskatchewan Book Awards, an event founded by the Saskatchewan Writers Guild, the Saskatchewan Publishers Group and the Saskatchewan Library Association fifteen years ago to recognize and celebrate the achievements of Saskatchewan authors and publishers and help promote their books. Titled *The Great Sand Hills: A Prairie Oasis*, the book



Branimir Gjetvaj and Rebecca L. Grambo sign copies of *The Great Sand Hills: A Prairie Oasis* at the Saskatchewan Book Awards Gala held November 24th in Regina.

Photo courtesy Gary Seib.

was also a finalist in the Saskatchewan Book of the Year, the Non-fiction Award, the Scholarly Writing, and the Publishing in Education categories.

*The Great Sand Hills: A Prairie Oasis* is a colourful 124-page book that demonstrates the beauty and the uniqueness of this endangered space. It offers an intriguing look at the natural and human history of this little-known prairie jewel, and discusses the complex factors that will determine its future. The book was written by award-winning author Rebecca L. Grambo and features striking photography by Branimir Gjetvaj.

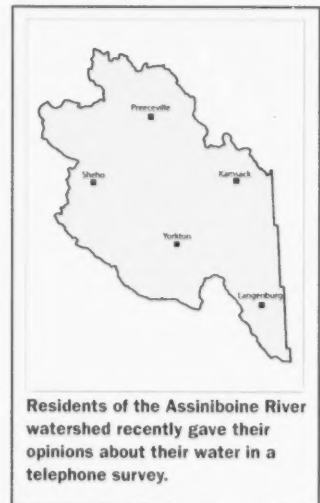
Copies of *The Great Sand Hills: A Prairie Oasis* are available for \$24.95 at the Book and Briar Patch in Regina or McNally Robinson in Saskatoon. Copies can also be ordered directly from Nature Saskatchewan by calling 1-800-667-4668 or e-mailing [info@naturesask.ca](mailto:info@naturesask.ca).

## Assiniboine River Watershed Residents Surveyed

Over 500 residents of the Assiniboine River watershed recently took part in a telephone survey on their water supplies and various water protection issues.

The survey was conducted in early December on behalf of the Assiniboine Watershed Stewardship Association. Both rural and urban watershed residents were asked a series of questions on such topics as their awareness of what source water is and what can be done to protect it, how confident they are that their water is safe, and the impact they believe various activities have on the quality of their drinking water. The Association will use the results of the survey to determine how best to raise public awareness about source water protection, and also as a benchmark against which to measure increases in awareness over time.

To find out more about the Assiniboine Watershed Stewardship Association and their work, please call Watershed Manager Aron Hershmillier at (306) 786-1786 or e-mail [a.hershmillier@assiniboinewatershed.com](mailto:a.hershmillier@assiniboinewatershed.com).



# Allow us to introduce...

## Tammy Miller



The Saskatchewan Watershed Authority recently hired Tammy Miller as an Agri-Environmental Technologist. Tammy is originally from Melfort, and graduated in 2003 from Olds College with a Diploma in Land Resource Management, majoring in Soil & Water conservation.

Tammy will be involved in coordinating and promoting landowner stewardship projects related to riparian area management in the Carrot River watershed. Her term position concludes on March 31st, 2008.

If you are interested in working with Tammy on projects to enhance and protect your riparian areas, you can reach her by phone at (306) 862-1758, or by e-mail at [tamara.miller@swa.ca](mailto:tamara.miller@swa.ca).

## Amy Woodard



The Saskatchewan Watershed Authority recently added Agrologist (Articling) Amy Woodard to its staff. Amy was born and raised in Delisle, and graduated in 2004 from the University of Saskatchewan with a Bachelor of Science in Agriculture, majoring in Environmental Science.

Amy will be working primarily within the Missouri Coteau on voluntary stewardship agreements benefiting Species at Risk. Her term position concludes on August 31st, 2008.

If you are interested in working with Amy to improve your operation and protect Species at Risk, you can reach her in the Authority's Weyburn office by phone at (306) 848-2354, or by e-mail at [amy.woodard@swa.ca](mailto:amy.woodard@swa.ca).

## JeanAnne Prysliak



JeanAnne Prysliak recently joined the Saskatchewan Watershed Authority as an Agri-Environmental Technologist. JeanAnne, who is originally from Yorkton, completed her Diploma in Integrated Resource Management and Bachelor of Science in Environmental Biology, a combined program offered by the University of Regina and SIAST.

JeanAnne's work with the Authority will primarily involve coordinating voluntary landowner stewardship agreements in the Missouri Coteau, with a focus on projects intended to protect Species at Risk. Her term position concludes on March 31st, 2008.

If you are interested in working with JeanAnne on a project to help protect Species at Risk on your land, you can reach her in the Authority's Swift Current office by phone at (306) 778-8424, or by e-mail at [jeanne.prysliak@swa.ca](mailto:jeanne.prysliak@swa.ca).

## Maurija Skansen



This September, Maurija Skansen was hired by the South Saskatchewan River Watershed Stewards Inc. as their first Watershed Coordinator.

Maurija grew up on her family's farm near Souris, Manitoba. Her Saskatchewan roots come from her mother, who was raised near Cadillac. Maurija has a Degree in Chemistry and a Diploma in Land & Water Management, and has worked in the fields of occupational health and safety, environmental analytical chemistry, and natural resource management.

As the Watershed Coordinator, Maurija will be responsible for overseeing the implementation of the South Saskatchewan River Watershed Source Water Protection Plan. To contact Maurija, please call her at (306) 867-9549, or e-mail [info@southsaskriverstewards.ca](mailto:info@southsaskriverstewards.ca).

# Focus On:

## The North Saskatchewan River Watershed

The North Saskatchewan River watershed incorporates a broad diversity of water users and water-related activities. Within Saskatchewan, the watershed covers a total of 41,000 km<sup>2</sup> and includes 51 Rural Municipalities, 29 First Nations lands and 17 reserves, 100 towns and villages, and the Cities of Lloydminster, North Battleford, and Prince Albert. It also includes a portion of Prince Albert National Park. The population of the watershed, based on 2001 census data, is approximately 116,500 persons, not including uncensused First Nations lands.

The North Saskatchewan River watershed is one of seven priority planning areas in the province. In 2004, four Watershed Advisory Committees made up of local representatives were formed to develop a plan to help sustain water quality and quantity in the watershed.

These watershed residents, with assistance from the Saskatchewan Watershed Authority and other agencies, will soon complete a draft of the ***North Saskatchewan River Watershed Source Water Protection Plan***. This draft Plan includes over 140 key actions that target priority water quality and quantity issues within the watershed. Some of the priority issues addressed in the Plan include:

### 1. Water Conservation

Traditional water management focuses on increasing supplies to meet any new demand. However, in many areas of the world water demand is reaching or exceeding the sustainable supply, drawing greater attention to conservation as a means to meet growing population, agricultural and industrial needs. Prairie residents have long valued water as critical to their well-being and economic opportunities, and increasingly, they appreciate the need to protect supplies through sustainable use.



Irrigation is the second largest licensed and/or unlicensed surface water allocation category in the watershed, behind industrial allocations.



### 2. Surface Water Quantity

Areas of the North Saskatchewan River watershed have experienced both prolonged droughts and seasonal flooding in the past. Surface water supplies must be managed to protect people and property from flooding, while at the same time mitigating the effects of water shortages during drought periods. Meanwhile, residents of the watershed need to be prepared to deal with floods and droughts when they occur. Surface water quantity is also very important to agriculture, tourism and recreation, and industry within the watershed.



Jackfish and Murray lakes, seen here, are two of the popular tourism and recreation destinations in the watershed.



Using the proper procedures when developing a water well is crucial to protecting ground water sources.

### 3. Ground Water

The majority of rural residents in Saskatchewan use ground water as their primary source of drinking water, as do many communities. Depending on a number of inter-related factors, such as the amount of till overlaying an aquifer or the condition of any water wells that have been established in it, ground water resources can be in danger of contamination. At the same time, ground water withdrawals can place stress on the resource if they exceed the aquifer's recharge rate. Ground water use must be carefully managed to avoid contamination and to ensure the sustainability of the resource.

### 4. Surface Water Quality

Good water quality is essential for human health. The quality of the water taken from different sources can vary significantly, depending on the influence of numerous factors. One of these is the way people use and interact with the environment around them, such as growing crops, drilling for oil, raising livestock, paving roads, disposing of garbage, and so on. Consideration must be given for how these activities affect water quality and, by extension, human health. Effective monitoring is also needed to ensure that water quality objectives are being met.



Regular water quality monitoring is necessary to make sure water sources are safe to use.

### 5. Natural Habitat

Humans are not the only species that need water. A variety of wildlife, bird and fish species also depend on the quality and quantity of water in their habitat to survive. Virtually all of today's threats to natural habitat and wildlife populations are caused by human mismanagement of biological resources. So while protecting water quality and quantity through proper resource management is important for human use, it is also important for the conservation of Saskatchewan's biodiversity.



Small wetlands can provide important habitat for a variety of species.

### 6. Plan Implementation

Once the *North Saskatchewan River Watershed Source Water Protection Plan* has been completed, work will begin on implementing the key actions contained within it. The successful implementation of the plan will depend on strong local leadership from active, passionate people in the community who have a vested interest in protecting their source water. It will also depend on commitment by the partners and on financial and technical support from the local, provincial and federal governments.

Before the *North Saskatchewan River Watershed Source Water Protection Plan* is finalized, residents will have several opportunities to view and further understand the recommendations and actions contained in it. Residents can provide their comments and suggestions at several open houses which will be held in early 2008. For more information about the draft *North Saskatchewan River Watershed Source Water Protection Plan*, please contact Brad Ashdown at (306) 933-6823 or visit [www.swa.ca](http://www.swa.ca).



## This Ranch Watches the Pennies

When talking with Gary Nickel, it soon becomes obvious that he is enthusiastic about the cow/calf industry. He takes the business seriously, paying close attention to production and to the financial and marketing aspects which are crucial to the bottom line.

Gary, his wife Shari and their family operate the third-generation Nickel Ranch northeast of Borden. The last few years they have calved around 300 cows, though according to Gary, they are not set on any certain number of cows – rather, they simply expand the herd when it makes sense economically.

One advantage to ranching near the North Saskatchewan River is the abundance of pastureland nearby. The ranch has two main blocks of pasture within five miles of the headquarters. This allows them to trail cows to and from pasture as well as make use of a pasture pipeline from the water well at the yard.

Over the last few years, they have also taken on several quarters of pastureland in partnership with a fellow producer. This arrangement has allowed for expansion of grazing land while sharing labor and capital costs.

Recently, the ranch has had enough extra forage to do some custom grazing to complement their own cow herd. "It is nice when they go home in the fall and you don't need any feed for them," Gary says.

Nickel is also a member (and current president) of the nearby East Borden Grazing Co-op, a 1,000-head community pasture. This organization takes advantage of neighborly co-operation and a part-time pasture manager to provide economical summer grazing for their cattle.

One production factor that the Nickels keep a close eye on is their feed costs. To help reduce the amount of winter feeding that needs to be done, they try to keep the herd on pasture until December. That means they must plan their grazing rotation to save some pastures until fall.

When it does come time to take the cattle off pasture, the Nickels use cereal swath grazing as their main method

of winter feeding. Gary proclaims that he "hates feeding cows" and strives to let the cows do as much of the work as possible. He knows that every time he starts his tractor it costs him money, noting that he has calculated \$20 per hour in depreciation alone!

Even throughout calving, the pregnant cows are moved out to the swaths each morning and come home each night. This way, only the nursing mothers need to be fed each day. This helps free up more time to supervise the calving process.

Nickel speaks highly of the current popularity of agri-environmental programming. He has been able to make good use of funding from Agriculture and Agri-Food Canada, the Saskatchewan Watershed Authority, and Ducks Unlimited Canada to help with seeding forages, cross fencing, portable windbreaks and calf shelters, a solar watering system, and a GPS unit.

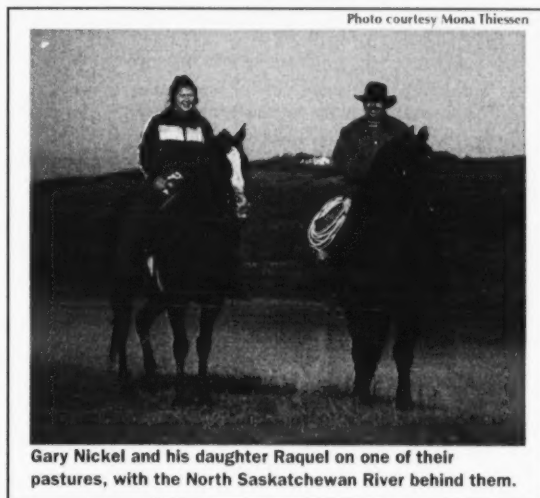
This programming has allowed him to move more quickly towards his long-term goals for the ranch by giving him more options for providing forage, water, and shelter. He has also received funding for some of these projects through the Redberry Lake Watershed Agri-Environmental Group Plan, and appreciated the technical support available through this community initiative.

The Nickels have put careful thought into their production cycle, choosing a staggered calving season. The first group of cows starts calving around the second week of February, with other groups starting in early

March and early April. That allows them to spread out the labor in the spring and make more use of their facilities. Having different breeding groups also lets them make better use of the bull battery.

Contrary to what you often hear these days, Nickel believes that it is the early calving cows that net him the most money. With his management system, he calculates that they don't cost him much more, yet the higher weaning weights equal more dollars at the sale.

Each of the management strategies used on the Nickel Ranch helps them achieve their overall objective: to wean the biggest possible calves and do it as cost efficiently as possible. Experience has taught them that putting effort into management is one of the keys to that goal.



Gary Nickel and his daughter Raquel on one of their pastures, with the North Saskatchewan River behind them.

# Protecting the Moose Jaw River from Household Dangers

Photo courtesy City of Moose Jaw.



Photo courtesy Fisheries and Oceans Canada.



The Thunder Creek, pictured here, flows through Moose Jaw.

The products we use every day can become potentially lethal to our environment. When they are allowed to directly enter the ground, municipal landfills and open water bodies, household waste can have devastating impacts. Our water sources, plants, fish and other wildlife can suffer due to careless disposal of hazardous materials.

In October and November 2007, the Moose Jaw River Watershed Stewards Inc. initiated a public awareness campaign to educate local residents on the potential impact harmful household substances could have on the Moose Jaw River. A series of articles dealing with the risks posed by water softening, pharmaceuticals, soaps, shampoos, phosphates and information on how to measure our "Water Footprint" were published each week in the Moose Jaw Sunday Times and other local publications.

"Products normally used in homes or businesses such as cleaning fluids, paints, solvents, toilet bowl cleaner, oil, pesticides, fertilizer and many others can negatively effect the health of both wildlife and humans," said Tammy Myers, B.Sc., Stewardship Technician for the Moose Jaw River Watershed Stewards Inc.

"Some of the chemicals found in these products can cause nausea, dizziness and headaches. Even more alarmingly, birth defects, cancer, and liver and kidney damage can result."

Disposing of waste through sinks or storm drains will allow the toxic substances to enter the sewer system, introducing them directly into receiving waters. Nor can the waste be buried, as the materials can not only contaminate the soil but can also find its way into aquifers, contaminating precious ground water sources.

In rural areas, personal sewage lagoons are used by many landowners for wastewater treatment. In the lagoons,

waste is broken down to acceptable levels through natural processes by bacteria and algae. However, if a product such as antifreeze enters a sewage lagoon in high concentrations, it may poison the bacteria needed for sewage treatment. As such, the harmful chemicals can then enter surface water sources when the lagoon is drained.

There are several ways in which residents can help protect water supplies from contamination:

- Do not dispose of any hazardous materials into open bodies of water or sewer systems.
- Use non-toxic alternatives to products normally used, and use them in small, efficient amounts.
- Reuse products instead of discarding as much as possible.
- Take unused portions of products such as bleaches and pesticides to collection depots in your area.
- Take advantage of local recycling locations for oil, solvents, and batteries.
- Separate household garbage from hazardous materials.
- Avoid over-use of household chemicals.
- Use potassium-based water softening salt and avoid phosphorus-based cleaning products and detergents.

"It is our hope that through this campaign, residents of the Moose Jaw River watershed will explore alternatives to harmful materials commonly used in their homes. We will continue to provide valuable information and support to our community in order to help residents protect our water," said Myers.

For more information on the potential threats of waste to our water supplies, contact the Moose Jaw River Watershed Stewards Inc. at (306) 691-3399, or visit them online at [www.mjriver.ca](http://www.mjriver.ca)

## Hello Voluntary Stewards!

Thank you for taking the time to read the Winter 2008 edition of the *Prairie Update*! As always, we hope you have enjoyed the articles included in this newsletter, and we welcome any comments you have. And of course, our sincere thanks go to those who agreed to share their stories with us in these pages.

We particularly hope you enjoyed our feature on the Silvester family and the many changes they've made to their operation. After the drought conditions of 2001-2002, this family took steps to make sure that they would never again be left without dependable water sources for their livestock. They also chose to make better use of their native prairie pastures, and did it all in a way that provides much-needed habitat for the Sprague's Pipit. With assistance from the Government of Canada's Habitat Stewardship Program for Species at Risk, the Silvesters now have a system that works for their operation and for the birds.

You can find more information on the Saskatchewan Watershed Authority's Prairie Stewardship Program in back issues of this newsletter. These issues, as well as interactive maps featuring other stewardship project demonstration sites, can be viewed on our website at [www.swa.ca](http://www.swa.ca).

Angela Bethune  
Paul Chomos  
Ryan Lorge

## Share Your Ideas!

If you have comments or ideas about this newsletter, please contact:

**Angela Bethune** at (306) 787-8043 or  
e-mail [angela.bethune@swa.ca](mailto:angela.bethune@swa.ca); or  
**Paul Chomos** at (306) 694-3017 or  
e-mail [paul.chomos@swa.ca](mailto:paul.chomos@swa.ca); or  
**Ryan Lorge** at (306) 787-6958 or  
e-mail [ryan.lorge@swa.ca](mailto:ryan.lorge@swa.ca).

For information about the Prairie Stewardship Program please contact:

**Jennifer Lohmeyer** at (306) 787-8707 or  
e-mail [jennifer.lohmeyer@swa.ca](mailto:jennifer.lohmeyer@swa.ca)

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Wildlife Habitat Canada  
Wyoming Game and Fish Department

## Coming Events

For more information, please contact the following staff members in the office nearest you:

<b>North Battleford</b>	Jeremy Brown	446-7460
<b>Nipawin</b>	Tammy Miller	862-1758
<b>Regina</b>	Etienne Soulodre	787-0661
<b>Swift Current</b>	Krista Connick	778-8280
	JeanAnne Prysliak	778-8424
	Bob Springer	778-8301
<b>Weyburn</b>	Amy Woodard	848-2354
<b>Yorkton</b>	Jason Puckett	786-5845
	Lyndon Hicks	786-1496